ABSTRACT
Objective: to examine the tendency of the individual with Machiavellian behavior to create budgetary slack in a situation of negative affect.
Method: experimental research with 390 undergraduate students of accounting from Brazilian higher education institutions, and for data analysis, the structural equation modeling technique was chosen using the SmartPLS software, version 3.
Originality/Relevance: the relevance of the study is to measure the moderation effect of the intensity of negative affect imposed by punishment on the relationship between Machiavellianism and budgetary slack. New studies on Machiavellianism provide evidence with a focus on negative affect, more specifically on the punishment for incorrect information, as well as exploring the antecedents of budgetary slack, which can modify the behavior of managers in organizations.
Results: the findings indicate that the Machiavellian personality can be considered an antecedent of budgetary slack, in addition to being something intrinsic in the individual, who even in the face of the intensity of negative affect imposed by the threat of punishment as an environmental stimulus, managed to inhibit the creation of budgetary slack.
Theoretical/Methodological contributions: our findings add to the literature in this area, as it demonstrates that Machiavellian personality can be considered as an antecedent of budgetary slack and uses the Machiavellian Personality Scale (MPS), in order to validate a scale on the national scene, in addition to increasing the discussion on the intensity of negative affect, and its moderation effect.
Keywords: Machiavellianism; Budgetary Slack; Intensity of Negative Affect; Punishment.
1 INTRODUCTION

The corporate budget is vulnerable to gaming behaviors that end up creating slack and, consequently, limit the effectiveness of this instrument (Blay, Douthit & Fulmer, 2019). Therefore, budgeting is a topic widely researched in the literature, and within this theme, budgetary slack stands out widely in the literature (Aguiar & Souza, 2010; Daumoser, Hirsch & Sohn, 2018).

Studies on budgetary slack relate this theme to several variables and in different contexts, such as perception of the legitimacy of the role (Douthit & Majerczyk, 2019); negative affect intensity effect (Blay et al., 2019); Honesty (Blay et al., 2019; Daumoser et al., 2018) budget-based incentive schemes (Liessem, Schedlinsky, Schwering & Sommer, 2015), budget participation (Arnold, 2007; Brown, Evans & Moser, 2009; Dunk & Perera, 1997, Widanaputra & Mimba, 2014); motivational factors for organizational commitment and involvement in work (Nouri, 1994).

Even in the face of numerous studies carried out with some divergent results, there is no consensus in the literature on what causes the constitution of budgetary slack (Buzzi, Santos, Beuren & Faveri, 2014). For example, budgetary participation has a negative influence on budgetary slack (Pundarika & Dwirandra, 2019). In the search to expand the empirical knowledge on the subject in question, this study links the budgetary slack with the Machiavellian personality of individuals.

Typical characteristics of a Machiavellian individual are considered, according to Souza (2016), the ability to defraud, act in an unethical manner, modify financial reports, including the budget. It is noteworthy that individuals with a higher level of Machiavellianism (high Machs) have a stronger predisposition to disengage from ethical standards and take advantage of opportunities, focusing on personal advantages to the detriment of individuals with a lower level of Machiavellism (low Machs) (Hartmann & Maas, 2010).

Thus, Machiavellianism becomes an estimated construct in organizational studies (Dahling, Whitaker & Levy, 2009; Vleeming, 1979). This is believed to have encouraged studies on Machiavellianism abroad, albeit slowly, but in Brazil, studies on the association of Machiavellianism with organizations are still very early (Grohmann & Battistella, 2012a; Grohmann & Battistella, 2012b).

With the intention of exploring this theme, some researchers related Machiavellian behavior to organizational aspects, such as vocational interests and professional career (D’Souza & Lima, 2018; Jonason, Wee, Li, & Jackson, 2014; Kowalski, Vernon, & Schermoer, 2017; Spurk, Keller & Hirschi, 2016); leadership (Ruiz-Palomino & Linues-Langreo, 2018; Volmer, Koch, & Göritz 2016); work performance (Qin & Xu, 2013), workplace climate perceptions (Jonason, Wee, & Li, 2015); ethical dilemmas (Schepers, 2003; Tang & Chen, 2008; Wakefield, 2008); budgetary slack (Hartmann & Maas, 2010); willingness to share knowledge (Liu, 2008); economic opportunism (Sakalaki, Kanellaki & Richardson, 2009).

The study uses the new measurement scale, the Machiavellian Personality Scale (MPS). Grohmann and Battistella (2012a) recommend carrying out new studies on the subject of Machiavellianism with the intention of revalidating this new measurement scale for the Brazilian context and relating this theme to other organizational constructs, precisely to explore the interactions of Machiavellian behavior in Brazilian organizations.

The construct of Machiavellianism demonstrated a predictive ability in a variety of areas and, in several behaviors, in addition to its well-established validity in the literature in the field of psychology, it became propitious to investigate further on the subject of Machiavellianism (Hartman & Maas, 2010). Individuals with a high level of Machiavellianism do not react to negative effects like other individuals, but it is believed that
they can react to the increased probability of detection and greater punishment, according to the economic theory (Murphy, 2012). For this reason, Murphy (2012) suggests further studies on Machiavellianism, focusing mainly on negative affects, more specifically on the punishment for incorrect information in order to expand her study.

Furthermore, Buzzi et al. (2014) comment that research involving budgetary slack is necessary to discover variables related to the constitution of this slack, emphasizing that it is a complex topic, with some studies reporting inconclusive results. Given this context, this study intended to answer the following question: What is the influence of Machiavellian behavior on the creation of budgetary slack in a situation of intensity of negative affect imposed on the individual? Thus, the aim of this study was to examine the tendency of the Machiavellian individual to create budgetary slack in a situation of negative affect.

Based on the results, this study intends to contribute theoretically by expanding the discussion of investigations on variables related to the constitution of budgetary slack by exploring whether the intensity of negative affect, more specifically, punishment, influences Machiavellian behavior in the creation of budgetary slack. In addition, a contribution is expected in view of the validation of the MPS scale in the Brazilian context, as suggested by Grohmann and Battistella (2012a).

2 THEORETICAL BACKGROUND

2.1 Machiavellianism and Budgetary Slack

Machiavellianism is defined as a behavior in which the individual manipulates others to gain more benefits for themselves in relation to a situation where there is no such manipulation, in order to prove the argument that the ends justify the means (Christie & Geis, 1970). Thus, the individual who has this type of behavior is considered manipulative, unscrupulous and with the capacity to do whatever is necessary to achieve their goals (Mendonça, Silva & Silva Filho, 2018). According to Tang and Chen (2008), Machiavellianism is the intermediary in the relationship existing between the love of money and unethical behavior. Therefore, it is considered a dark personality trait that incites manipulation in interpersonal relationships and is favorable to unethical behavior aiming at self-interest (Ruiz-Palomino & Linuesa-Langreo, 2018). In view of this, individuals with this behavior strongly present in their personality the understanding that it is acceptable to use all means to achieve what they want, even though they are aware that it may be some illicit means (Mendonça et al., 2018).

Machiavellianism is apparently not something fixed in the individual, but something changeable, especially under the action of environmental stimuli (Bereczkei, 2015). That said, the flexibility of malevolent individuals stands out, according to Bereczkei (2015), as they disguise their selfishness and appear to be altruistic in the company of other individuals, perhaps to raise their reputation before their group. As a result, Machiavellians constantly analyze the context in which they are inserted and the members involved, in order to align their behavior in accordance with changes in the environment (Bereczkei, 2015).

There are studies that prove that having employees with Machiavellian behavior on certain occasions, and in a reduced number, is productive for the organization because the performance of this employee will be superior to the others, because individuals with this profile are constantly in search of better results, regardless of the means they use to make this happen (Grohmann & Battistella, 2012b). Given this, Jones and Paulhus (2014) identified as
positive aspects of this type of behavior: the use of strategy, the ability to form alliances and the persistence to constantly maintain a good reputation with other employees.

On the other hand, which concerns the negative aspects of the Machiavellian profile, it can be highlighted by acts such as: lying, manipulation, the calculating and cold way used to make decisions renouncing ethical standards to achieve what they want, and the ability to convince others to acquire their own benefits (Ross Jr. & Robertson, 2000). Based on the studies by Volmer et al. (2016), Machiavellian leaders are detrimental to the success and well-being of their subordinates’ careers. This is precisely because they are concerned only with their goals and manipulate their subordinates for particular interests (O’Boyle Jr., Forsyth, Banks & McDaniel 2012).

Hartmann and Maas (2010) also relate Machiavellianism to the organizational environment, commenting that the presence of three elements together, namely, hierarchical position, Machiavellian personality and pressure exerted by unit managers may be the antecedents of the involvement of controllers in creating budgetary slack. However, in the present study, the focus will be only on the Machiavellian personality of the individual. Thus, the budget becomes a mechanism for the individual to create budgetary slack (Beuren & Verhagen, 2015).

Over time, the literary view on budgetary slack has been transformed, as Elmassri and Harris (2011) was initially seen as a negative behavior, later, it came to be accepted as a positive view (rational and acceptable). Based on the studies by Merchant (1985), Young (1985) and Dunk and Perera (1997), budgetary slack is defined as the excessive amount of resources estimated to perform a given task, this amount being the difference between the budgeted amount and the actual cost of accomplishing that task. Creating budgetary slack portrays the choice, as a rule, of the manager for an amount that is easier to be achieved compared to what is stipulated by the organization (Beuren & Verhagem, 2015).

Budgetary slack can also be understood as the amount by which middle managers, without the authorization of their superiors, underestimate the productive capacity, underestimating the sales revenue values and/or overestimating the values of expenses and costs stipulated in the budget. under their responsibility (Davis, DeZoort & Koop, 2006; Junqueira, Oyadomari & Moraes, 2010).

Given the dysfunctional behavior of creating budgetary slack, Beuren and Verhagem (2015) point out that the effort made by managers in creating slack can affect the effectiveness of the organization’s budget. Thus, slack is strongly related to other mechanisms, such as budget participation and organizational commitment. According to the findings of Dunk and Perera (1997), if the manager’s commitment is high, their budgetary participation will result in a reduction in slack, however, if the commitment is low, their budgetary participation will probably result in an increase in the creation of slack.

However, when the individual is faced with a situation of this type, there is a conflict of interest, because from the perspective of the organization, such practice contradicts the organization as a whole, but from the perspective of the manager, creating budgetary slack is positive for their unit (Hartmann & Maas, 2010). Based on this understanding, the creation of budgetary slack is considered an ethical dilemma (Hartmann & Maas, 2010).

In this case, Church, Kuang & Liu (2019) strongly believe that the manager’s opportunity to receive benefits from the slack created by them will influence their behavior in reporting. Furthermore, Liessem et al. (2015) emphasize that certain characteristics predispose the individual to morally disengage. For example, Machiavellian behavior. Therefore, individuals with this profile are portrayed by Hartmann and Maas (2010) as less emotional, more cynical, and with a strong propensity to take advantage of the loopholes for their own benefit.
It is estimated that individuals judge budget slack differently from each other, for example, individuals who have their values strongly clarified are more likely to understand budget slack as an unethical means (Hobson, Mellon & Stevens, 2011). Therefore, this type of individual will not create budgetary slack. Based on Hartmann and Maas (2010), it is believed that individuals with more (less) Machiavellian behavior are more (less) likely to create budgetary slack. Therefore, the following research hypotheses were raised:

H1: Individuals who exhibit more Machiavellian behavior tend to create budgetary slack.

2.2 Intensity of Negative Affect - Punishment

When a factual statement is recorded, the organization’s subordinates need to explicitly refer to a lie in order to accentuate the preference for honesty, so it follows that subordinates create less slack when a factual statement is needed (Rankin, Schwartz, & Young, 2008). Budgetary slack is restricted by preferences for the individual’s honesty, and to intensify these preferences, the intensity of negative affect is used (Blay et al., 2019).

Therefore, Blay et al. (2019) point out that individuals denote erroneous amounts in order to create budgetary slack, however such action differs from the social norm of honesty, and precisely for that reason, the individual has a preference for honesty in order to avoid suffering the negative effect stipulated for infringing some social norm of honesty. As confirmed by Murphy (2012), individuals are strongly looking for ways to reduce negative affects, since they do not appreciate suffering from such feelings. Frank (1988) stressed that emotions are used as a mechanism to keep individuals honest.

Given this, individuals with a greater intensity of negative affect certainly have their preferences for stronger honesty, which culminates in an increase in the individual’s adherence to a social norm of honesty, and therefore preferences for wealth must be lower and preferences for honesty, greater (Blay et al., 2019). Thus, honesty is intrinsically motivated, revealing the individual’s desire to avoid generating false information, even in the face of financial privileges that encourage the individual to commit such an act (Rankin et al., 2008).

Otherwise, diverging from some social norm of honesty makes the individual feel a negative effect, which causes disutility, and the size of the disutility is directly related to the intensity of the negative effect, that is, the greater the negative effect, the greater the disutility (Blay et al., 2019). However, this statement differs from Montag and Tremewan (2020), who point out that individuals cannot measure a specific size of punishment’s disutility, however, they believe that individuals are moved by the punishment possibilities.

However, certain individuals will transgress the social norm, this is due to the absence of a plausible threat of punishment (Spitzer, Fischbacher-Herrnberger, Grön & Fehr, 2007). Next, this transgression will generate an incorrect statement or a willingness to report, resulting in the use of rationalization on the part of individuals to decrease the negative affect that accompanies “bad” behavior arising from disobedience of the social norm of honesty (Murphy & Dacin, 2011; Murphy, 2012).

In order to generate evidence that supports the acceptance of their acts, arising from some illegal or unethical behavior, individuals rationalize what they have done, reconstructing the conditions of a given situation to justify the act (Murphy, 2012). According to Condé, Almeida and Quintal (2015), rationalization is defined as the means that the individual uses to substantiate and support their achievement before others, since from the angle of the author, their practice is totally admissible.

There are certain indications that relate character traits to negative affects, or even the lack of them (Murphy, 2012). As an example, Christie and Geis (1970) pointed out that high
Machiavellianism in the Creation of Budgetary Slack

Machs feel less discomfort. Just as Murphy (2012) found in her experiment that the most prominent predictor of false information is character, not attitude.

The study by Spitzer et al. (2007) examined the brain processes involved in the behavioral response of human beings to the threat of punishment for violating social norms and, among the findings, it was found that Machiavellian individuals followed the following strategy: at the non-punishable phase, paid little and made a good profit, in turn, in the punishable phase, increased their contribution to avoid punishment; consequently, in general, these individuals stood out for obtaining the highest profit among the other participants. Corroborating, thus, Jones and Paulhus (2014) regarding the image of Machiavellians as good strategists.

To broaden the theoretical framework on this subject, Birkás, Csathó, Gács & Bereczkei (2015) investigated the associations of sensitivity with reward/punishment and Machiavellian interpersonal tactics with self-report measures. In such a case, it was noted based on self-report data that Machiavellian individuals are more susceptible to rewards and pay less attention to punishment warnings.

Regarding the ease of adaptation of Machiavellian individuals, Czibor and Bereczkei (2012) emphasize that, when identifying any self-interest or situation that demands it, they follow the rules as a type of manipulation, always with the purpose of receiving some advantage. As in the case of the experiment of Jones (2014), participants with a Machiavellian profile, when playing, were under threat of punishment, given that, they only took necessary risks, which culminated in the long-term victory. For this reason, Machiavellians are seen as self-interested and opportunistic; therefore, it is convenient to have good skills in detecting and analyzing risks to their own interests (Spitzer et al., 2007). In this situation, it is worth reflecting on whether the individual with Machiavellian behavior, even in the face of opportunity and reason, will cease to create budgetary slack because of the negative affect coming from the imposition of punishment. Therefore, the following hypothesis was elaborated:

H2: Individuals with high Machiavellian behavior, when exposed to the intensity of negative affect under threat of punishment, will cease to create budgetary slack.

Figure 1 illustrates the theoretical model of the study.

![Path models](image)

After presenting the bases of Machiavellianism and budgetary slack and intensity of negative affect - punishment, the methodological procedures are presented below.
3 METHODOLOGY

To test the assumptions of the study, an experiment was carried out with a 2x2 design, in which the intensity of negative affect from the imposition of punishment was manipulated. The dependent variable, in turn, is budgetary slack. Therefore, in this experiment, participants assume the role of unit manager and send budget reports for the following year to the general manager of the hypothetical company, a fact that classifies the nature of the experiment as laboratory (Carpenter, Harrison & List, 2005). As sample characterization, were used: gender, age, program, program phase, type of university, experience in the job market and if the curriculum of the program offers the subject of ethics and discipline focused on budget, in addition to knowing if the participant already has prior knowledge of the budget and has taken the subject of ethics and/or budget.

The sample consisted of 390 participants, all students of higher education in accounting from public or private universities in Brazil, with the control group consisting of 201 respondents and the experimental group with 189 respondents, since it was necessary to exclude 4 answers because they did not fit the study sample. It is confirmed that the sample size is adequate, since, by the test performed in Gpower, considering the size of 0.15, at the level of significance of 5% with power of 0.80, the minimum required by each group was 55 valid responses.

The generalization of the findings due to the use of undergraduate students to represent other populations is supported in the literature (Cohen, Pant & Sharp, 2001), as this type of research has already shown results compatible with a sample of professionals (Lakey, Rose, Campbell & Goodie, 2008; Majors, 2016). For data collection, contact was made with the coordinators of the programs by email, and these, in turn, forwarded the questionnaire link to undergraduates, and the Google electronic form was open for answers from 04/15/2020 to 08/05/2020.

It is noteworthy that the participants were randomly assigned to the two scenarios of the experiment, with or without manipulation of the intensity of negative affect, so as to be able to control the groups. After that date, the form was closed, making it impossible to receive new responses, which were imported into an Excel spreadsheet, later organized.

The respondents are mostly female participants, enrolled in public universities, who are still in the initial phase of the program, and who have experience in the labor market. In addition, the average age (in years) is 24.7, with 25.1 for the control group and 24.2 for the experimental group, and the average time (in years) of experience in the labor market is 4.1, being 4.5 and 3.6, for the control group and experimental group, respectively. Still in the characterization of the respondents, it was observed some details about the curriculum of the programs and knowledge in the study area.

It should be noted that most accounting programs offers the subject of ethics in their curriculum, and that most of the participants in this experiment were already aware of ethics because they had already taken that subject. Thus, as the subject focused on budgeting is also present in most curricula, however, the majority of participants have not yet taken this subject, however, they have demonstrated a knowledge of budgeting.

For data analysis, the participants’ Machiavellian behavior was measured first. For this, we used the Machiavellian Personality Scale (MPS), which was translated and adapted to the Brazilian context by Grohmann and Battistella (2012a), originally this model was proposed by Dahling et al. (2009). Sometimes, national studies, for fear of using a scale not yet disseminated in the literature, prefer to apply the original scale and translate it, however, if the due care is not taken in the translation process, the questions may lose meaning or become
confused. For the MPS scale in this study, a 7-point Likert scale was used (1-totally disagree to 7-totally agree).

In a second step, the intensity of negative affect resulting from the imposition of punishment was manipulated, which was verified when some participants received an article to promote negative affect and others did not receive that article, emphasizing that proportionality was respected according to the number of participants (Appendix 1).

For this, a short article was randomly delivered to the participants, being a story involving a tragic event to promote a negative affect (experimental group), and the other participants do not receive the article, only the other tasks, precisely to not promote any affect (control group). Literature recommends using stories to promote affect, as in Blay, Kadous and Sawers (2012); Blay et al. (2019).

Thirdly, the task is a study of judgment and decision making in an economic environment. This task is adapted from Faria (2012), and in it the participant assumes the role of unit manager, being exposed to four hypothetical situations created based on situations in the actual operational context and using a 7-point Likert scale.

The participant was properly contextualized in the scenario, being informed that they would be in a period of preparing the budget for the following year and that they would need to make decisions on the budget proposals to be submitted to the general manager. Depending on the decision made by the participant, it could reflect the creation of budgetary slack or not.

In data analysis, descriptive statistics and structural equation modeling (SEM) technique estimated from partial least squares (PLS) were used, using the SmartPLS-version 3 software, this technique is responsible for verifying the hypotheses of research and comparison of the two theoretical models. For this, first the evaluation of the measurement model occurs, using the PLS algorithm, and then, the structural model evaluation through bootstrapping and blindfolding. In order to test the hypotheses, it was necessary to take into account the moderation effect and multigroup analysis.

4 RESULTS AND DISCUSSIONS

4.1 Measurement model

In order to increase knowledge of the effect of the intensity of negative affect on budgetary slack, a scenario of creating budgetary slack was manipulated. According to Hair Jr., Hult, Ringle & Sarstedt (2016), the first step to analyze the PLS-SEM technique is the measurement model. From this model, it is possible to analyze the nature of the relationships of the constructs, using the criteria of: composite validity (demonstrates the internal validity of the construct); convergent validity (demonstrates how much the measures converge for each construct); discriminant validity (represents the difference for each construct) and reliability (internal and composite) (Ringle, Silva & Bido, 2014). The model object of this study has 2 constructs, and its validity and reliability are listed in Table 1.

The procedures for checking the validity and reliability of the constructs were the same for both groups. First, when analyzing the composite reliability, it is noted, according to Table 1, that in the two groups (control and experimental), the set of measures for each construct presented a value greater than 0.7, as recommended by Nunnally and Bernstein (1994).

Then, the convergent validity is observed, through the AVE (Average Variance Extracted), which points out how much the variance of the measures is explained in the construct, so, except for the Machiavellian construct in the experimental group, the other constructs were greater than 0.5 as indicated by Hair Jr. et al. (2016), which represents that
the model is satisfactory. Moreover, the discriminant validity was analyzed through the Fornell-Larcker criterium, which indicated that the constructs are distinct from each other (Hair et al., 2016). Finally, the absence of multicollinearity was analyzed, since the VIF (variance inflation factor) was less than 5, as recommended by Hair et al. (2016).

**Table 1**
Measurement model of the control and experimental groups

<table>
<thead>
<tr>
<th>Control group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PANEL B = Reliability and convergent validity</td>
<td>Construct</td>
<td>Composite reliability</td>
<td>AVE</td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>0.677</td>
<td>0.561</td>
<td>0.041</td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.794</td>
<td>0.493</td>
<td></td>
</tr>
<tr>
<td>PANEL B = Discriminant validity by the Fornell-Larcker criterion</td>
<td>Construct</td>
<td>Budgetary slack</td>
<td>Machiavellianism</td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>0.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.181</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PANEL B = Reliability and convergent validity</td>
<td>Construct</td>
<td>Composite reliability</td>
<td>AVE</td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>0.728</td>
<td>0.601</td>
<td>0.041</td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.739</td>
<td>0.424</td>
<td></td>
</tr>
<tr>
<td>PANEL B = Discriminant validity by the Fornell-Larcker criterion</td>
<td>Construct</td>
<td>Budgetary slack</td>
<td>Machiavellianism</td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>0.775</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.149</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.2 Structural model

After assessing the model reliability, Hair Jr. et al. (2016) indicate moving to the stage of interpretation of the structural model, and with this analysis it is feasible to observe the relationships between the constructs, in the face of a trend scheme with statistical validity. Thus, with this analysis, it is possible to test the hypotheses raised in the study, by applying bootstrapping techniques with 5,000 subsample rotation, and the blindfolding platform.

Initially, it was decided to identify whether there is a significant difference between the groups or not, for this purpose the PLS-MGA analysis was performed. To verify the permutation analysis, it is necessary to first evaluate the MICOM, which determines whether the variances of the constructs are equal or not (Henseler, Ringle, & Sarstedt, 2016). That said, Table 2 lists the values obtained with the application of the previously mentioned techniques.

**Table 2**
Invariance measurement test (MICOM)

<table>
<thead>
<tr>
<th>Composite</th>
<th>Correlation Value (=1)</th>
<th>Dif – Mean (CG – EG)</th>
<th>[5%]; [95%]</th>
<th>Permutation p-value</th>
<th>Composite invariance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgetary slack</td>
<td>0.998</td>
<td>0.403</td>
<td>0.907</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.989</td>
<td>0.951</td>
<td>0.640</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td>Dif – Mean (CG – EG)</td>
<td>[2.5%; 97.5%]</td>
<td>Permutation p-value</td>
<td>Equal means?</td>
<td></td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>-0.090</td>
<td>[-0.182; 0.200]</td>
<td>0.398</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.004</td>
<td>[-0.202; 0.191]</td>
<td>0.968</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td>Dif – Variance (CG – EG)</td>
<td>[2.5%; 97.5%]</td>
<td>Permutation p-value</td>
<td>Equal variances?</td>
<td></td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>-0.115</td>
<td>[-0.350; 0.367]</td>
<td>0.556</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Machiavellianism</td>
<td>0.055</td>
<td>[-0.278; 0.317]</td>
<td>0.724</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** 5,000 permutations; two-tailed to 0.05 significance

**Note.** CG=Control Group; EG= Experimental Group
As for the PLS-MGA analysis, based on Table 3, there were only numerical differences, so there was no statistically significant difference between the control group and the experimental group, according to PLS-MGA (B = 0.065; p = 0.287), permutation (B = 0.065; p = 0.545). In the control group, there was no inference of the intensity of negative affect imposed by the punishment, thus, with the control group it was possible to verify that individuals with more Machiavellian behavior tend to create more budgetary slack, which provides evidence that support H1 at the 5% significance level (β = 0.214, p <0.054).

Table 3
Permutation and multigroup analysis between constructs

<table>
<thead>
<tr>
<th>Relations between constructs</th>
<th>Control group</th>
<th>PLS-MGA Henseler</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Machiavellianism -&gt; Budgetary slack</td>
<td>B</td>
<td>T-value</td>
</tr>
<tr>
<td>0.214</td>
<td>1.926</td>
<td>0.054*</td>
</tr>
<tr>
<td>Experimental group</td>
<td>B</td>
<td>T-value</td>
</tr>
<tr>
<td>Relations between constructs</td>
<td>0.149</td>
<td>1.391</td>
</tr>
<tr>
<td>H2: Machiavellianism -&gt; Moderation effect -&gt; Budgetary slack</td>
<td></td>
<td></td>
</tr>
</tbody>
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Note. CG=Control group; EG= Experimental group; Q²=0.008; *p<0.10 **p<0.05; ***p<0.01
Note. P-Henseler <0.05 or > 0.95*

This finding is in agreement with Hartmann and Maas (2010), who estimate that more Machiavellian individuals feel less affected by the ethical standards of the profession, and, therefore, are more prone to imprecise budgetary situations. Thus, undergraduates in accounting showed more Machiavellian behavior and can make biased budgetary choices, such as creating budgetary slack.

However, there is literature that differs from this finding, as Mendonça et al. (2018), who found that accounting students are inclined to be more honest, appreciate their integrity and, for that, take attitudes with decorum and attention both in the academic and in the organizational environment. Corroborating, Wakefield (2008) stated that on average accountants are less Machiavellian individuals than other professionals, however, also found that Machiavellian scores vary widely among accountants in practice.

With the experimental group, the intention was to test the moderation of the intensity of negative affect imposed by punishment on the relationship between Machiavellian behavior and creating budgetary slack, however, even though there were differences between the groups, there was no significance in the moderation between Machiavellian behavior and budgetary slack, therefore, H2 is rejected. Figure 2 summarizes the statistical findings.

Figure 2. Summary of results
Note: *p<0.10.
These results indicate that even exposing Machiavellian individuals to the intensity of negative affect, such as punishment, it is not possible to say that this inhibited them from creating budgetary slack, which converges with Birkás et al. (2015) who confirmed that Machiavellian individuals do not pay much attention to punishment, but rather focus more on rewards. Therefore, the suspicion of Murphy (2012) that Machiavellians react to punishment is not confirmed.

In addition, Church et al. (2019) state that the manager behavior towards reporting is influenced by the opportunity they have to receive some benefit in return. Since, this benefit is in their own interest (Sakalaki, Richardson & Thépaut, 2007). Nevertheless, there are findings that differ from this, such as that by Spitzer et al. (2007), who found that Machiavellian individuals formulated a strategy in order to avoid punishment. As well as in the experiment of Jones (2014), in which malevolent individuals, even under threat of punishment, were only susceptible to the necessary risks.

4.3 Results discussions

This study examines the tendency of the individual with Machiavellian behavior to create budgetary slack in a situation of negative affect imposed by the threat of punishment. Hartmann and Maas (2010) believe that budgetary slack is created in the presence of three elements together, namely: Machiavellian personality, hierarchical position and pressure exerted by unit managers. Therefore, our findings confirm that these elements do not necessarily need to be present concurrently for the individual to create budgetary slack.

However, there are individuals who may or may not create budgetary slack, depending on their profile. As the results show that individuals with a more Machiavellian profile tend to create budgetary slack. It is assumed that accounting students, object of this study, are more Machiavellian individuals who have a predisposition to be morally disengaged (Liessem et al., 2015), are more cynical and take advantage of the opportunities they find, in this case, the creation of budgetary slack, to get benefits (Hartmann & Maas, 2010).

However, this is not necessarily negative, considering that in the literature the creation of budgetary slack is accepted as something rational and acceptable (Elmassri & Harris, 2011), being considered a protection mechanism (Merchant, 1985), which protects the professional in the face of unstable resource scenarios. Given the fact that Machiavellian personality is apparently something mutable, exceptionally, under the influence of environmental stimuli (Bereczkei, 2015), and that budgetary slack is limited by the preference for honesty (Blay et al., 2019), these variables were stimulated with the intensity of the negative affect imposed by the threat of punishment.

Given that it is believed that by creating a setting that significantly increases the anticipated negative affect on the individual, they will not incorrectly produce their report (Murphy, 2012), the study did not confirm that the intensity of negative affect imposed by punishment is the environmental stimulus that the individual with a Machiavellian profile needs to intensify the preference for honesty in their reports, and that Machiavellian behavior cannot be changeable.

This is estimated to be due to the fact that more Machiavellian individuals experience less discomfort (Christie & Geis, 1970) than other individuals. Corroborating that the predictor of false information that stands out is character, not attitude (Murphy, 2012), it should be noted that these individuals are manipulative and unscrupulous (Mendonça et al., 2018), characteristics that are embedded in the malevolent individual, therefore, diverging from the statement by Bereczkei (2015) that the Machiavellian personality is not something intrinsic to the individual.
Furthermore, it is clear that Machiavellian individuals are not moved by the punishment possibilities, which differs from Montag and Tremewan (2020), due to the fact that the negative affect imposed by punishment with the rationalization of their act of producing erroneous reports with budgetary slacks is reduced, in order to justify such transgression (Murphy & Dacin, 2011; Murphy, 2012).

Thus, the imposition of a threat of punishment does not prevent this individual profile from violating the social norm of honesty, since Spitzer et al. (2007) stated that the transgression stems from the lack of plausible punishment. In general, individuals with Machiavellian behavior tend to create more budgetary slack, and even exposing them to the negative affect of punishment, the creation of slack has not been inhibited.

5 FINAL CONSIDERATIONS

This research sought to examine the tendency of the individual with Machiavellian behavior to create budgetary slack in a situation of negative affect. For this, an experiment was conducted with undergraduates in accounting from higher education institutions, obtaining 390 participants. Based on the data collected, it was possible to verify the characterization of the participants and, test the hypotheses that involve the variables object of this study (Machiavellianism, intensity of negative affect and budgetary slack).

The results confirmed that accounting undergraduate students are more Machiavellian and therefore tend to create more budgetary slack, corroborating Hartmann and Maas (2010) who claim that individuals with more Machiavellian behavior are more likely to create budget slack. Individuals whose values are strongly clarified consider budget slack an unethical means (Hobson et al., 2011), however, Machiavellians’ ability to defraud, act unethically and modify financial reports is typical (Souza, 2016).

However, the results did not confirm that the intensity of negative affect imposed in advance by the threat of punishment would inhibit the most Machiavellian individuals from creating budgetary slack. This shows that even in the face of the flexibility that malevolent individuals have to camouflage their selfishness and shape themselves according to circumstances (Bereczkei, 2015), this personality is intrinsic to the individual. As well as, the predictor of incorrect information that stands out is the character (Murphy, 2012).

In short, the most Machiavellian individuals react differently to negative effects (Murphy, 2012). Thus, these individuals create budgetary slack and produce erroneous reports, even in the face of the threat of punishment, as they are less sensitive to punishment and it is in their essence to constantly focus on their own benefit. Since Machiavellians are manipulative, unscrupulous and do whatever is necessary for their personal goals (Mendonça et al., 2018).

This is due to the fact that Machiavellians feel less discomfort (Christie & Geis, 1970), and because they do not like to suffer with feelings, when they are stimulated by negative affects, they try to reduce these effects (Murphy, 2012), which provide them with the opportunity to produce incorrect information, since emotions are used as a mechanism to keep individuals honest (Frank, 1988).

These findings establish theoretical and practical implications. As theoretical contributions, it adds knowledge on the themes of budgetary slack, Machiavellian behavior and intensity of negative affect. Besides that, it seeks to demonstrate that Machiavellian personality is a variable that is related to the constitution of budgetary slack, as well as exploring the moderating effect of negative affect on the relationship between Machiavellianism and budgetary slack, and makes use of the MPS scale in the Brazilian context in order to contribute to the validation of this instrument.
When international scales are simply translated, they can lose context and even lose meaning. Contributing to the validation of the translation of an international scale, as is the case of MPS, favors researchers in the field, who, by applying a reliable scale, reduce the risks of applying a scale that does not correspond to reality or is confusing to respondents.

As practical contributions, our findings can favor organizations that have professionals with a more Machiavellian personality in their workforce. These organizations require more knowledge about the stimuli that have an effect on these individuals, in order to manipulate them and make the admission of these professionals something functional and productive for the organization.

The limitation of this study is the fact that the MPS scale is a self-report, plus the manipulative and cynical capacity of Machiavellians, there may be manipulation of responses by the participant who is highly Machiavellian. In addition, the R² of the dependent construct reached a value considered weak, which represents that it explained only 4.1% budgetary slack, therefore, it is necessary to be parsimonious regarding the results found in this study.

For future research, it is suggested to further explore the relationship between Machiavellian behavior and budgetary practices, exceptionally, to examine this relationship on the effect of the reward, since it is characteristic of Machiavellian to focus on their personal gains.

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Corrêa & Lavarda (2021)


RESUMO

Objetivo: examinar a tendência do indivíduo com comportamento maquiavélico a criar folga orçamentária em uma situação de afeto negativo.

Método: pesquisa experimental com 390 discentes de ciências contábeis de instituições de ensino superior brasileiras, e para a análise dos dados optou-se pela técnica de modelagem de equações estruturais, realizada no software SmartPLS, versão 3.

Originalidade/Relevância: a relevância do estudo está em medir o efeito moderador da intensidade de afeto negativo imposto pela punição na relação entre maquiavelismo e folga orçamentária. Novos estudos envolvendo maquiavelismo aportam evidências com foco nos afetos negativos, mais especificamente na punição por informações incorretas, assim como explorar os antecedentes da folga orçamentária, que podem modificar o comportamento de gerentes nas organizações.

Resultados: os achados indicam que a personalidade maquiavélica pode ser considerado um antecedente da folga orçamentária, além de ser algo intrínseco no indivíduo, que mesmo diante da intensidade de afeto negativo imposto pela ameaça de punição como estímulo ambiental, conseguia inibir a criação de folga orçamentária.

Contribuições teóricas/metodológicas: os achados agregam à literatura dessa área, por demonstrar que a personalidade maquiavélica pode ser considerada como um antecedente da folga orçamentária e se utiliza da Escala de Personalidade Maquiavélica (EPS) a fim de validar essa escala no cenário nacional, além de aumentar a discussão sobre intensidade de afeto negativo e seu efeito moderador.

Palavras-chave: Maquiavelismo; Folga Orçamentária; Intensidade de Afeto Negativo; Punição.